

YAVAPAI COUNTY- ZILLOW VALUE COMPARE PROJECT



versus



2016 Tax Year

Single Family Mass Appraisal Showdown

Presentation Disclaimer



versus



This presentation in no way represents an endorsement of Zillow, or any other company, jurisdiction or publication.

All information in this presentation was gathered from public sources or publications. The views expressed by the presenter represent opinion only.

The sole purpose of this presentation is to foster the sharing of ideas and discussion related to the topic of Zillow's effect on the assessment profession.

SFR, guess the Current Zillow Value?

Colonial 2 Story, 55,000 sq feet

1792 Year Built, 16 Beds, 35 Baths, 18 Acres

\$??????



Feedback and Prize!



versus



Colonial 2 Story, 55,000 sq feet
1792 Year Built,
16 Beds, 35 Baths,
18 Acres

Current Market Value \$ _____?



Pamela J. Pearsall

Yavapai County Assessor

Pam.Pearsall@yavapai.us

Name: _____

Willing to share ideas or experiences ab

Email: _____

On a scale of 1 thru 10, do you think Zillc

Zillow's growing influence will have a _____ impact on my jurisdictions business as usual.

Any comments? _____



versus



Thank you for attending!!!

Pamela J. Pearsall

Yavapai County Assessor

Pam.Pearsall@yavapai.us

Zillow Informal User Poll – Show of Hands

- On a scale of 1 – 10, from a mass appraisal perspective, how accurate do you think the Zestimates are?

Why did we undertake the study?



versus



“The Zestimate is automatically computed three times per week based on millions of public and user submitted data points”

Zillow – Industry Disrupter?



Average Monthly Users?

BUSINESS

Zillow Revenue More than Doubles on User Gains, Trulia Buyout

The real-estate website's shares rose more than 9% after hours

By CASSANDRA JARAMILLO

0 COMMENTS

Q1 of 2011..... 17 million

website Trulia.

Q1 of 2014..... 86 million

400 percent growth in 3 years

Zillow – Industry Disrupter?

[Investments](#) / [Lending](#)

Zillow planning to take lead in online transaction revolution

Pays big price, has big plans for DotLoop

Ben Lane August 5, 2015 1:15PM [1 Comment](#)



Zillow Group (**Z**) is positioning itself to take the lead in bringing the entire home-buying process online.

[dotloop](#)

[eclosing](#)

[Electronic Mortgages](#)

[Electronic signature](#)

[online real estate](#)

[online real estate listings](#)

[Zillow](#)

[Zillow Group](#)

[Zillow.com](#)

Zillow Group (**Z**) is positioning itself to take the lead in bringing the entire home-buying process online.

 [Email](#)

 [Print](#)

 [Reprints](#)

Zillow – Industry Disrupter?

Forbes ▾

ECONOMICS & FINANCE | 5/15/2015 @ 5:20PM | 11,004 views

Tesla, Zillow, Priceline And 5 Other Buys From T. Rowe Price Global Technology Manager Josh Spencer

SPENCER: Zillow's a perfect example. Some of these vertically-focused Internet companies, Zillow, LinkedIn, Netflix. I personally think Zillow will do to real estate classified and real advertising exactly what LinkedIn did to help wanted. I think within five to ten years, Zillow will be synonymous with a real estate search. This company that's doing about \$500 or \$600 million in revenue today could be doing \$400 or \$500 billion in revenue ten years from now, very high margin, subscription-based recurring because they're getting paid by agents.

Zillow's News Presence

INVESTORS.com
POWERED BY INVESTOR'S BUSINESS DAILY™
f t g+ in IBD FF

Home Mail Search

YAHOO! FINANCE

Recent
Z 105.515 -0.39%
More > Pop Out

Quote Lookup Go

Finance Home
My Portfolio
My Quotes News
Market Data
Yahoo Originals
Business & Finance
Personal Finance
CNBC
Contributors

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OPEN AN ACCOUNT

Scottrade


charles SCHWAB
Trader education, market insight and that's just the preview.

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HOME MAGAZINE DAILY INVESTING IDEAS TOP ADVISORS MARKET DATA PENTA

THE WALL STREET JOURNAL. | MONEYBEAT

MONEYBEAT | THE PULSE OF THE MARKETS.
Your indispensable guide to the hot topics shaping today's global markets.
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**Stocks to Watch**
News and commentary about the stocks you need to know about today

Search Stocks to Watch SEARCH

January 23, 2015, 1:48 P.M. ET

Zillow, Trulia Jump on Deal-Approval Speculation

Email Print Facebook Like 1 Google+ 0 Twitter Tweet 0 A A

By Chris Dieterich

Zillow (Z) and Trulia (TRLA) are popping on Friday. Why? [Vague rumors](#) that their merger will be approved by regulators are being cited in the financial press.

Trulia adds 11% while Zillow climbs 13% in recent trading.

Most Recent Posts >

Tesla Will Bring New Models To China, Stock Climbs

SEC Tackles Market Structure With Flawed Structure

General Electric: 25% Upside or Stuck in the Same Old Rut?

More Posts >>>

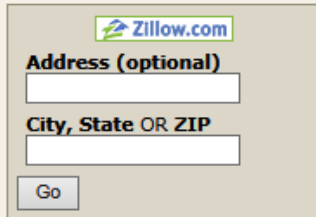
TRADES Free Research


Zillow's Growing Influence

Starting to see Assessment jurisdictions linking to Zillow

Other Links

- [Public Trustee](#) – For information pertaining to Foreclosures of Deeds of Trust and Release of Deeds of Trust
- [Property tax payments](#) – Payments are made to the
- ~~[Recorded documents database](#) – Allows you to query all documents affecting real property recorded in the office of the County Clerk & Recorder~~
- [House price index](#) – According to the Federal Housing Finance Agency (FHFA)
- Visit [Zillow.com](#) for house values in your area (Zillow is not considered an [endorsement](#))

A screenshot of a Zillow.com search form. It features the Zillow logo at the top left. Below it, there are two input fields: one labeled "Address (optional)" and another labeled "City, State OR ZIP". At the bottom left of the form is a "Go" button. The entire form is enclosed in a red rounded rectangle.


Address (optional)

City, State OR ZIP

Zillow's Growing Influence

1. When you were looking for a home to buy, did you:

DISCOVER

| | Yes | No |
|---|-----|-----|
| a. Collect ideas using social media? (e.g., Pinterest) | 25% | 75% |
| b. Explore a neighborhood using online maps or map apps? (e.g., Google Maps) | 72% | 28% |
| c. Get opinions about homes from friends or family on social media? (e.g., Facebook) | 29% | 71% |
| d. Look at listings on real estate websites or apps? (e.g., Zillow, Trulia, Realtor.com) | 83% | 17% |
| e. Research a neighborhood using local websites? (e.g., local chamber of commerce, local government websites) | 55% | 45% |

- <http://investorrelations.discoverfinancial.com/phoenix.zhtml?c=204177&p=RssLanding&cat=news&id=1990390>

Zillow Basics on Estimations

<http://www.zillow.com/academy/RecordedWebinars.htm>



Commitment to transparency around valuation accuracy

National median error of 7%

38% of Zestimates within 5% of sales

64% of Zestimates within 10% of sales

85% of Zestimates within 20% of sales

Errors are just as likely to be above the sale price as below the sale price.

Data Coverage and Zestimate Accuracy Table
Choose a location type below to change data:

| Top Metro Areas States/Countries* National | Zestimate Accuracy | Median Sale Price | Median Zestimate | Within 1% of Sale Price | Within 10% of Sale Price | Within 20% of Sale Price | Median Error |
|--|--------------------|-------------------|------------------|-------------------------|--------------------------|--------------------------|--------------|
| Atlanta, GA | ☆☆☆ | 1.9M | 1.8M | 37.5% | 64.6% | 85.9% | 7.0% |
| Baltimore, MD | ☆☆☆☆ | 946.9K | 897.3K | 43.0% | 70.3% | 86.5% | 6.0% |
| Boston, MA | ☆☆ | 1.3M | 1.3M | 36.0% | 66.3% | 90.0% | 7.1% |
| Chicago, IL | ☆☆☆ | 3.0M | 2.9M | 40.8% | 65.9% | 84.3% | 6.5% |
| Cincinnati, OH | ☆☆☆☆ | 764.2K | 696.9K | 40.8% | 66.9% | 85.7% | 6.4% |
| Cleveland, OH | ☆☆☆☆ | 794.9K | 727.0K | 41.8% | 69.6% | 86.9% | 6.1% |
| Dallas-Fort Worth, TX | ☆☆ | 2.0M | 1.9M | 20.7% | 44.6% | 79.7% | 11.1% |
| Denver, CO | ☆☆☆☆ | 897.0K | 858.0K | 40.6% | 71.4% | 93.2% | 6.3% |
| Detroit, MI | ☆☆☆ | 1.7M | 1.6M | 37.7% | 64.5% | 85.8% | 7.0% |
| Houston, TX | ☆ | 2.0M | 1.8M | -- | -- | -- | -- |
| Kansas City, MO | ☆ | 699.4K | 669.9K | -- | -- | -- | -- |
| Las Vegas, NV | ☆☆☆ | 637.1K | 637.1K | 36.3% | 67.5% | 88.7% | 6.9% |



Source: Data updated on August 27th 2014 and shown on Zillow.com

#ZillowSummit

Arizona Counties – Zillow Claims

<http://www.zillow.com/zestimate/#acc>

as of June 2015

| Arizona County | Zestimate Accuracy | Homes on Zillow | Homes with Zestimates | Within 5% of Sale Price | Within 10% of Sale Price | Within 20% of Sale Price | Median Error |
|----------------|--------------------|-----------------|-----------------------|-------------------------|--------------------------|--------------------------|--------------|
| Apache | 2 | 7,966 | 6,281 | 15.4% | 25.6% | 38.5% | 30.8% |
| Cochise | 2 | 50,089 | 46,506 | 28.3% | 48.3% | 73.0% | 10.3% |
| Coconino | 2 | 65,263 | 41,693 | 29.5% | 57.2% | 79.4% | 8.6% |
| Gila | 2 | 27,895 | 24,871 | 25.8% | 47.3% | 67.2% | 11.2% |
| Graham | 3 | 10,458 | 9,481 | 32.3% | 56.5% | 67.7% | 8.3% |
| Greenlee | 1 | 2,471 | 2,120 | -- | -- | -- | -- |
| La Paz | 2 | 10,818 | 7,977 | 15.3% | 30.5% | 52.5% | 18.3% |
| Maricopa | 4 | 1,405,006 | 1,326,698 | 42.4% | 68.3% | 88.8% | 6.2% |
| Mohave | 2 | 133,783 | 107,562 | 32.6% | 56.0% | 79.0% | 8.7% |
| Navajo | 2 | 53,080 | 37,462 | 29.2% | 54.5% | 74.7% | 9.0% |
| Pima | 4 | 374,311 | 334,143 | 41.8% | 67.4% | 87.3% | 6.3% |
| Pinal | 4 | 174,350 | 145,680 | 42.3% | 67.0% | 87.3% | 6.3% |
| Santa Cruz | 2 | 27,159 | 13,969 | 26.6% | 41.8% | 67.1% | 12.9% |
| Yavapai | 4 | 131,417 | 99,291 | 38.8% | 65.6% | 84.4% | 6.5% |
| Yuma | 3 | 66,987 | 59,149 | 34.3% | 57.8% | 77.8% | 8.1% |
| All Arizona | 4 | 2,541,053 | 2,262,883 | 41.0% | 66.5% | 87.0% | 6.5% |

Zillow Project Data Gathering Process

| USE TYPE | Parcels | Percent Of Pcls | Yavapai SFR Random Sample | Zillow Returned Estimates | Percent of RES SFR Pcls |
|----------------|---------------|-----------------|---------------------------|---------------------------|-------------------------|
| AG | 3,831 | 2.4 | | | |
| COMM | 4,999 | 3.2 | | | |
| EXEMPT | 3,355 | 2.1 | | | |
| RES CONDO | 4,057 | 2.6 | | | |
| RES MH | 20,852 | 13.2 | | | |
| RES OTHER | 2,409 | 1.5 | | | |
| RES SFR | 67,097 | 42.5 | 1,933 | 1,763 | 2.62% |
| VACANT | 51,342 | 32.5 | | | |
| Total | 157,942 | 100.0 | | | |

Zillow Project Data Gathering Process

Yavapai County Government | Welcome to LCI's Online... | Yahoo Finance - Business... | 2014 Division I Women's S... | Google | pcpa | oregon | graph Median Sales Price... | Create a map | BatchGeo | VERDE MLS | PAAK Single Sign On Login | Page | Safety | Tools

Homes Rentals Mortgages Agents Advice Local Home design More My Zillow

1975 N HEREFORD DR, 86305

LISTING TYPE ANY PRICE 0+ BEDS HOME TYPE MORE

CORRECT HOME FACTS SAVE HIDE REPORT HOME MORE

Zestimate Details

Add owner estimate

Zestimate \$335,462 +\$6,775 Last 30 days
Zestimate range \$305K - \$362K

Rent Zestimate \$1,594/mo -\$14 Last 30 days
Zestimate range \$1.4K - \$1.9K

Zestimate forecast \$338,414 +0.9% One year

ZESTIMATE 1 year 5 years 10 years

— This home
--- 86305
--- Prescott

Forecast

YAV_ZILLOW_RES_COMPARE_2016 [Shared] - Microsoft Excel

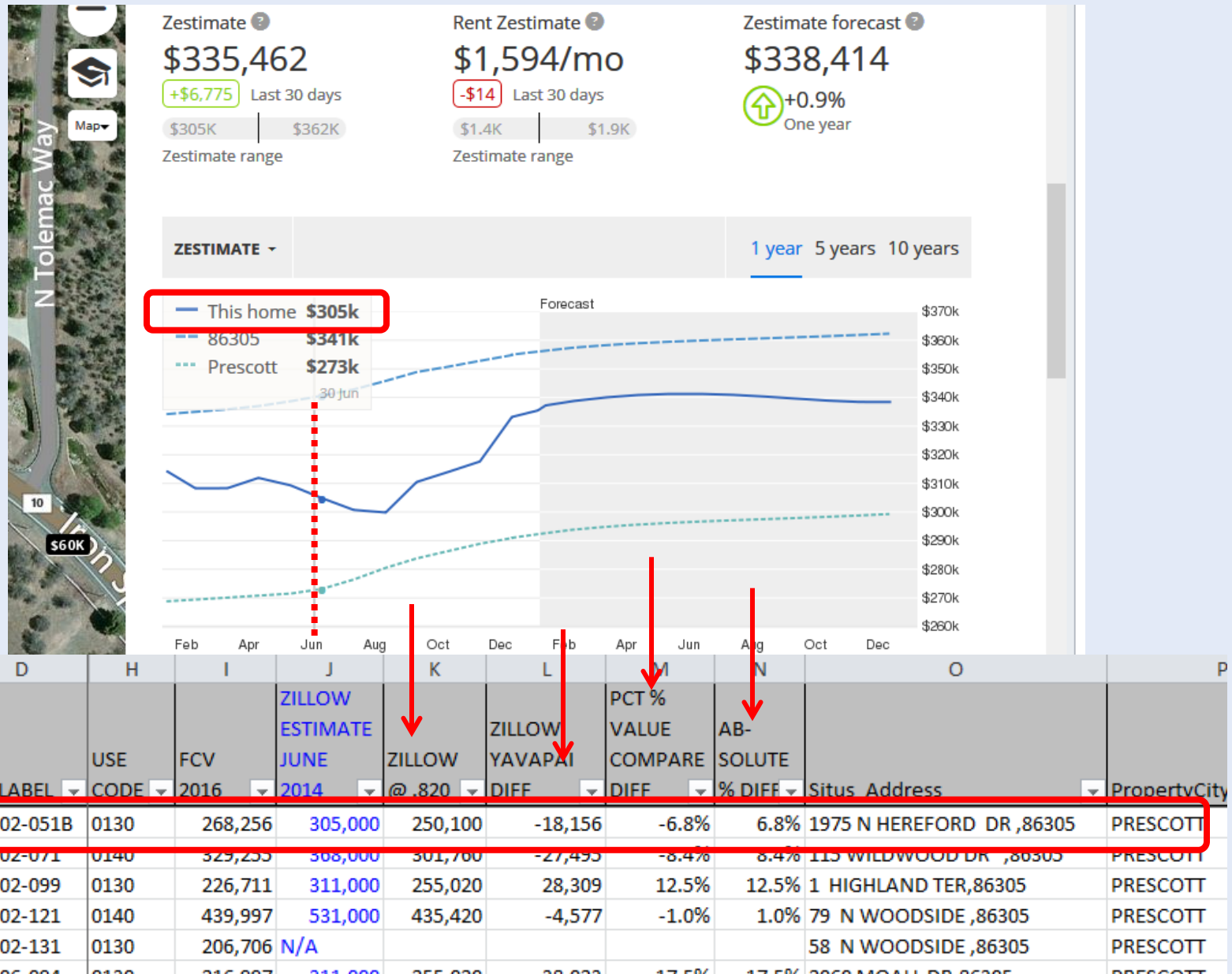
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|----|-------|------------|-----------|-------------|-------------|----|------|------|---------|--------------------------------|------------------|-------------------------------|-----------------------------------|-------------------------|------------------------------|--------------|---|
| | | | | | | | | | | ZILLOW ESTIMATE JUNE 201 | ZILLOW @ .820 | ZILLOW YAVAPAI DIFFEREN | PCT % VALUE COMPARE DIFF | AB- SOLUTE % DIFF | Situs_Address | PropertyCity | |
| 9 | Terri | R000000360 | 10001128C | 100-01-128C | Residential | 01 | 0108 | 0140 | 427,385 | 519,000 | 425,580 | -1,805 | -0.4% | 0.4% | 705 N HAPPY VALLEY RD, 86305 | PRESCOTT | |
| 10 | Terri | R000000372 | 10001133C | 100-01-133C | Residential | 01 | 0108 | 0140 | 494,952 | 551,000 | 451,820 | -43,132 | -8.7% | 8.7% | 5707 W RUSTIC TRL, 86305 | PRESCOTT | |
| 11 | Terri | R000000455 | 10002004M | 100-02-004M | Residential | 01 | 0103 | 0130 | 299,025 | N/A | | | | | 1830 N HEREFORD DR, 86305 | PRESCOTT | |
| 12 | Terri | R000000512 | 10002051B | 100-02-051B | Residential | 01 | 0103 | 0130 | 268,256 | 305,000 | 250,100 | -18,156 | -6.8% | 6.8% | 1975 N HEREFORD DR, 86305 | PRESCOTT | |
| 13 | Terri | R000000529 | 10002071 | 100-02-071 | Residential | 01 | 0105 | 0140 | 329,255 | 368,000 | 301,760 | -27,495 | -8.4% | 8.4% | 115 WILDWOOD DR, 86305 | PRESCOTT | |
| 14 | Terri | R000000551 | 10002099 | 100-02-099 | Residential | 01 | 0105 | 0130 | 226,711 | 311,000 | 255,020 | 28,309 | 12.5% | 12.5% | 1 HIGHLAND TER, 86305 | PRESCOTT | |

ite network on the web.*

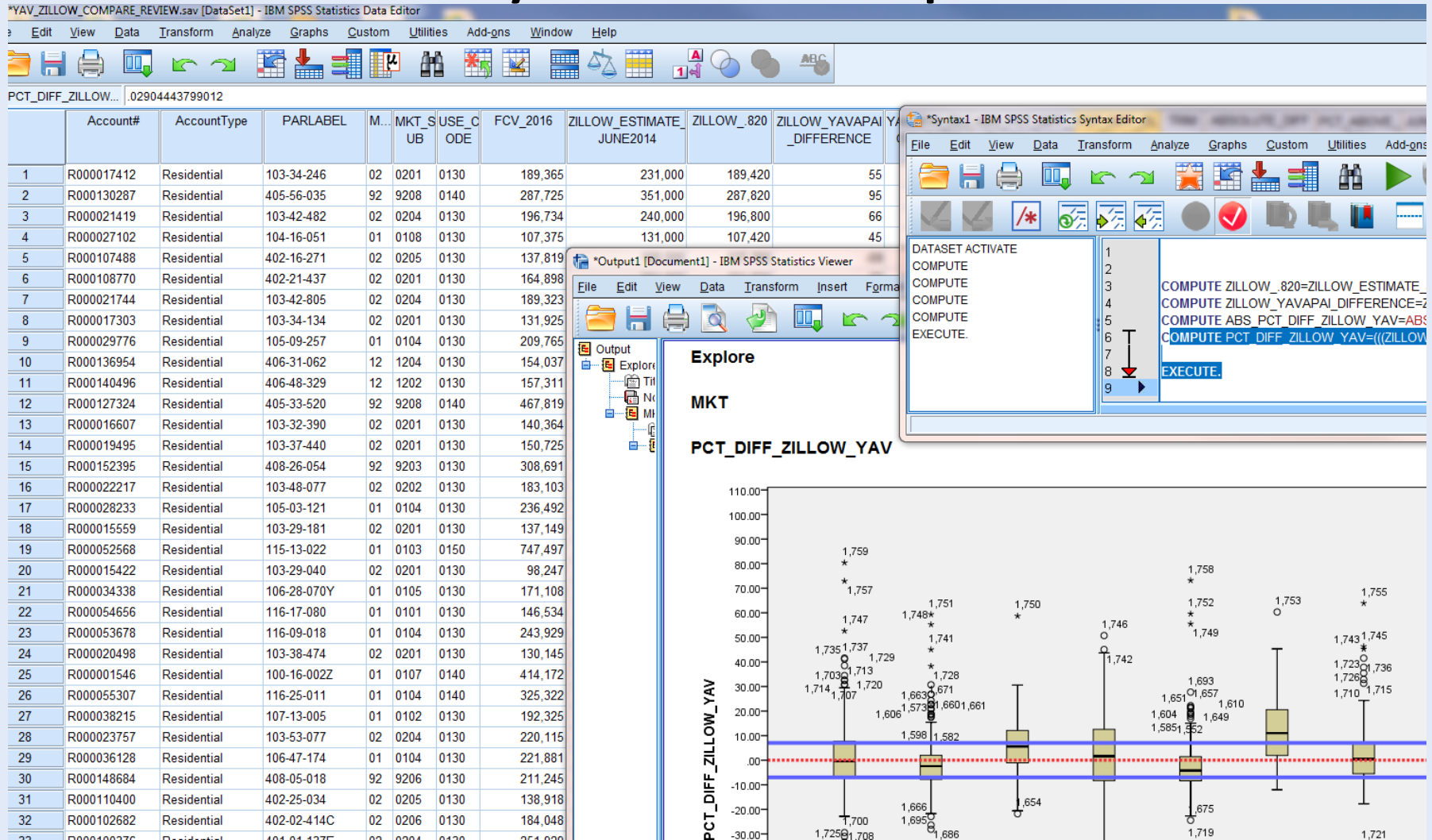
Forecasted views of this home
the first 7 days after listing for sale

an agent.

Zillow Project Data Gathering Process



Data Analysis and Output in SPSS



ZESTIMATE ▾

1 year 5 years 10 years

— This home **\$278k**
 - - 86305 **\$286k**
 - - - Prescott **\$230k**
 Feb 2011



Price History

| DATE | EVENT | PRICE |
|----------|-----------------|------------------|
| 04/01/14 | Listing removed | \$382,000 |
| 03/21/14 | Price change | \$382,000 +1.9% |
| 02/02/14 | Listed for sale | \$375,000 +47% |
| 12/04/12 | Sold | \$255,000 -5.5% |
| 10/24/12 | Pending sale | \$269,900 |
| 06/19/12 | Price change | \$269,900 -26.9% |
| 03/01/11 | Listed for sale | \$369,000 +94.2% |
| 05/15/02 | Sold | \$190,000 +31.0% |
| 10/29/93 | Sold | \$145,000 |

The MLS Listing Effect

Another Example of MLS Listing Effect

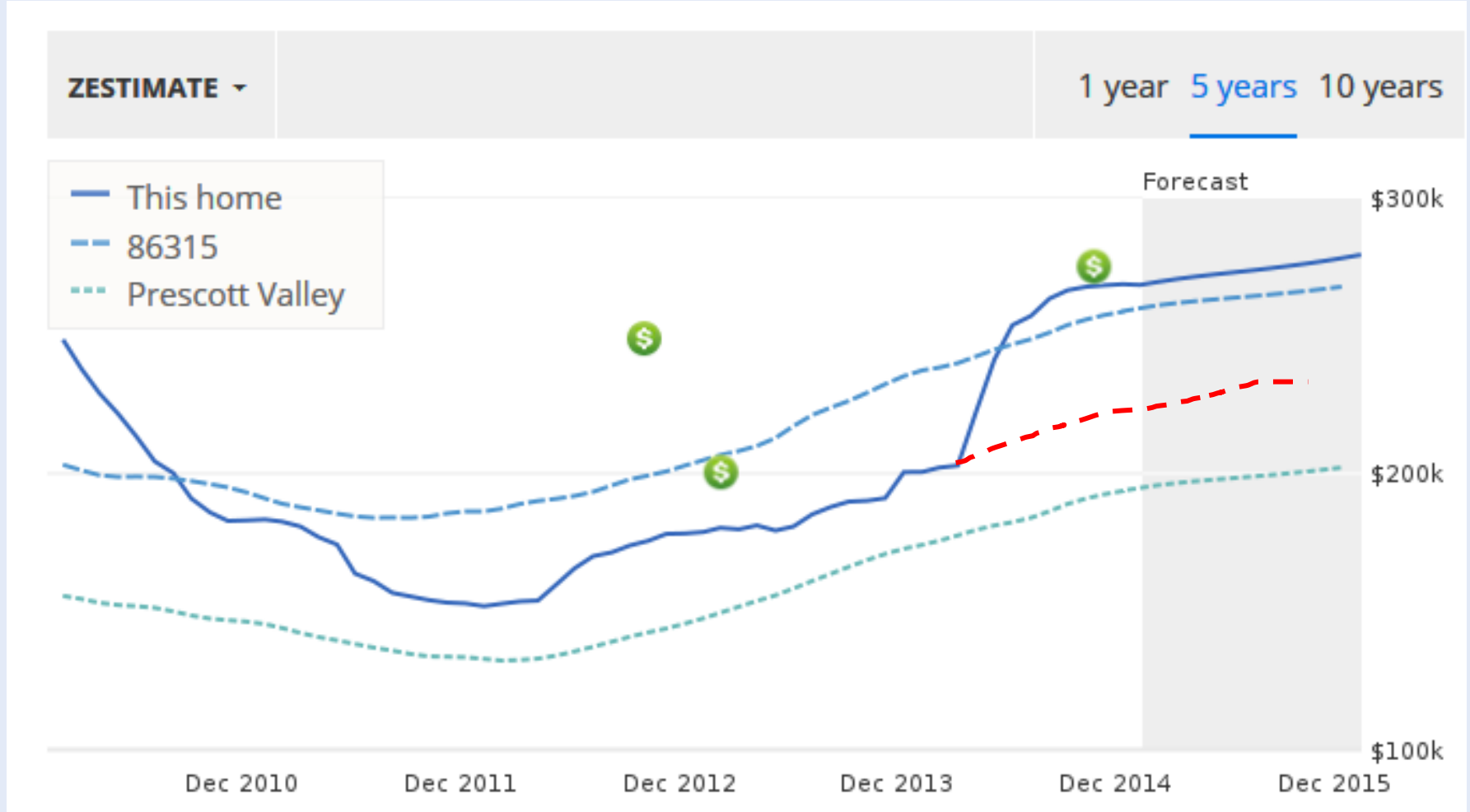


Price History

| DATE | EVENT | PRICE |
|----------|-----------------|------------------|
| 11/04/14 | Sold | \$375,000 -16.5% |
| 09/23/14 | Pending sale | \$449,000 |
| 07/16/14 | Price change | \$449,000 -8.4% |
| 06/10/14 | Price change | \$490,000 -18.1% |
| 02/14/14 | Listed for sale | \$598,500 +898% |
| 11/01/95 | Sold | \$60,000 |

[Less ^](#)

The Sales Price Effect



“training” the model

YAVAPAI COUNTY- ZILLOW VALUE COMPARE PROJECT



versus



Now the results

YAVAPAI Residential Sale Ratio Study 2014

| TY2016 Preliminary Sales Ratio Reports - Yavapai County | | | | | | |
|---|------|------------|----------------------|-------|--------|-------|
| Includes All TAFS -TY2016 NOV Values | | | | | | |
| | | Market | Market | | | |
| County | Type | Area | Name | Sales | MEDIAN | COD |
| 13 | RES | 1 | Prescott | 1,655 | 0.820 | 0.120 |
| 13 | RES | 2 | Prescott Valley | 1,339 | 0.820 | 0.086 |
| 13 | RES | 4 | Chino Valley | 300 | 0.820 | 0.118 |
| 13 | RES | 5 | West Yavapai | 207 | 0.819 | 0.213 |
| 13 | RES | 12 | Central Verde Valley | 625 | 0.818 | 0.099 |
| 13 | RES | 17 | Lower Verde Valley | 250 | 0.821 | 0.165 |
| 13 | RES | 92 | Sedona VOC | 554 | 0.820 | 0.104 |
| 13 | RES | Countywide | | 4,930 | 0.820 | 0.112 |

Source: Arizona Department of Revenue,
Equalization and Compliance Dept.

YAVAPAI Residential 2014

Year Over Year – Value Change Report

| TY2016 Year Over Year Value Change Report Summary - Yavapai County from 1/9/2015 File Extracts | | | | | | | | | |
|--|----------------------|---------------|---------------------|-------------|----------------|---------------|---------------|-------------------|----------|
| Market Area | Market Name | CY-FY % Match | Total MRecord Count | VSale Count | Non Sale Count | % Parcel Sold | Sale % Change | Non Sale % Change | % Change |
| Residential | | | | | | | | | |
| 1 | Prescott | 96.9% | 20,494 | 1,955 | 18,539 | 9.54% | 0.087 | 0.085 | 0.2% |
| 2 | Prescott Valley | 95.4% | 15,789 | 1,786 | 14,003 | 11.31% | 0.098 | 0.105 | -0.7% |
| 4 | Chino Valley | 97.2% | 3,995 | 333 | 3,662 | 8.34% | 0.101 | 0.105 | -0.4% |
| 5 | Western Yavapai | 99.1% | 3,679 | 213 | 3,466 | 5.79% | 0.181 | 0.179 | 0.2% |
| 12 | Central Verde Valley | 97.5% | 8,901 | 712 | 8,189 | 8.00% | 0.150 | 0.153 | -0.3% |
| 17 | Lower Verde Valley | 98.6% | 3,393 | 263 | 3,130 | 7.75% | 0.053 | 0.050 | 0.3% |
| 92 | Sedona VOC | 95.6% | 6,538 | 570 | 5,968 | 8.72% | 0.049 | 0.052 | -0.3% |

Source: Arizona Department of Revenue,
Equalization and Compliance Dept.

Results Summary

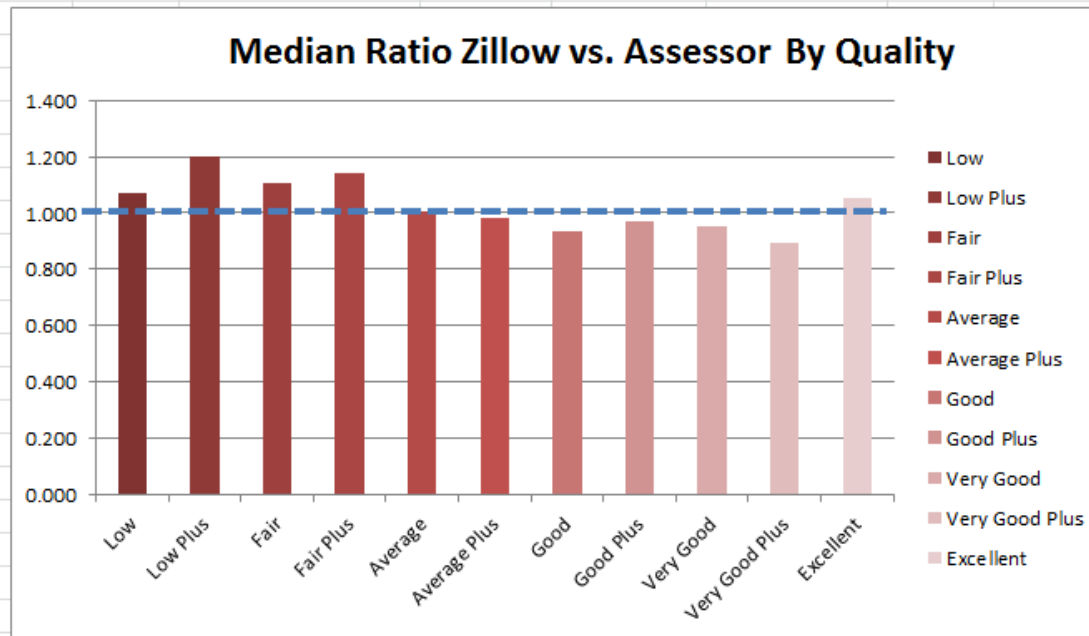
- The .82 adjusted Zillow estimate from June 2014 resulted in **median** absolute % difference from the Yavapai FCV of **6.8%**
- The .82 adjusted Zillow estimate from June 2014 resulted in **mean** absolute % difference from FCV of **9.4%**
- Zillow's Full Estimate (Zestimate) was above our 2016 NOV FCV **97.7%** of the time.

Zillow vs. Yavapai By Quality

| Ratio Statistics for ZILLOW .820 / FCV 2016 | | | |
|---|---------|--------|------|
| QUALITY | Parcels | Median | COD |
| Low | 2 | 1.073 | .052 |
| Low Plus | 16 | 1.199 | .295 |
| Fair | 5 | 1.106 | .083 |
| Fair Plus | 4 | 1.142 | .030 |
| Average | 1,324 | 1.005 | .089 |
| Average Plus | 64 | .984 | .080 |
| Good | 272 | .935 | .083 |
| Good Plus | 19 | .969 | .117 |
| Very Good | 43 | .951 | .065 |
| Very Good Plus | 4 | .894 | .060 |
| Excellent | 9 | 1.055 | .063 |
| Overall | 1,762 | .992 | .094 |

Overvalued

Undervalued



Zillow Quality Code Claim

How is construction quality determined?

Follow

The Construction Quality rating present on a listing or property page on Zillow is determined by your local county assessor. The ratings will vary depending on each county, and therefore we recommend contacting your local county assessor for more information.



Zillow Quality Codes?

June 2015

CONSTRUCTION

- Construction quality: 6.0 ?
- Roof type: Other
- Structure type: Ranch
- Unit count: 1

OTHER

- Floor size: 1,671 sqft

Oct 2015

CONSTRUCTION

- Exterior material: Stucco
- Roof type: Composition
- Structure type: Modern
- Unit count: 1

?

OTHER

- Floor size: 2,011 sqft

Zillow Dispersion Measured Against Yavapai Assessed Values

TY2016 Preliminary Sales Ratio Reports - Yavapai County

Includes All TAFS -TY2016 NOV Values



| County | Type | Market Area | Market Name | Sales | MEDIAN | COD |
|--------|------|-------------|----------------------|-------|--------|-------|
| 13 | RES | 1 | Prescott | 1,655 | 0.820 | 0.120 |
| 13 | RES | 2 | Prescott Valley | 1,339 | 0.820 | 0.086 |
| 13 | RES | 4 | Chino Valley | 300 | 0.820 | 0.118 |
| 13 | RES | 5 | West Yavapai | 207 | 0.819 | 0.213 |
| 13 | RES | 12 | Central Verde Valley | 625 | 0.818 | 0.099 |
| 13 | RES | 17 | Lower Verde Valley | 250 | 0.821 | 0.165 |
| 13 | RES | 92 | Sedona VOC | 554 | 0.820 | 0.104 |
| 13 | RES | Countywide | | 4,930 | 0.820 | 0.112 |

Note: The dispersion of Zillow values away from Assessor values (.094) was tighter than what Assessor values were measured against actual sales



Ratio Statistics for ZILLOW_.820 / FCV_2016

| MKT | Count | Median | Coefficient of Dispersion |
|---------|-------|--------|---------------------------|
| 01 | 611 | .995 | .095 |
| 02 | 445 | .976 | .073 |
| 04 | 124 | 1.056 | .072 |
| 05 | 81 | 1.016 | .134 |
| 12 | 232 | .958 | .079 |
| 17 | 91 | 1.110 | .133 |
| 92 | 178 | 1.004 | .086 |
| Overall | 1,762 | .992 | .094 |

Sale Ratio Study **Before** June 2014

| Sale Ratio Study <= June 2014 | |  | |  | |
|----------------------------------|-------------|--|-------------|---|-------------|
| | | YAVAPAI | | ZILLOW | |
| MKT | SFR Sale | Median | COD | Median | COD |
| 01 | 45 | .793 | .183 | .803 | .112 |
| 02 | 32 | .833 | .100 | .800 | .099 |
| 04 | 12 | .930 | .209 | .868 | .162 |
| 05 | 7 | .865 | .173 | .811 | .085 |
| 12 | 14 | .878 | .140 | .810 | .079 |
| 17 | 11 | .867 | .215 | .879 | .254 |
| 92 | 17 | .833 | .111 | .801 | .112 |
| Overall | 138 | .836 | .160 | .815 | .126 |

Sale Ratio Study **After** June 2014

| Sale Ratio Study After June 2014 | |  | |  | |
|----------------------------------|-----------|--|-------------|---|-------------|
| | | YAVAPAI | | ZILLOW | |
| MKT | SFR Sales | Median | COD | Median | COD |
| 01 | 16 | .911 | .142 | .828 | .132 |
| 02 | 16 | .865 | .120 | .818 | .188 |
| 04 | 2 | .850 | .035 | .822 | .140 |
| 12 | 5 | .856 | .147 | .808 | .098 |
| 17 | 2 | .771 | .113 | .805 | .108 |
| 92 | 3 | .704 | .165 | .731 | .150 |
| Overall | 44 | .857 | .138 | .818 | .152 |

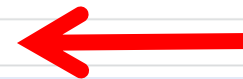
Do you ever change prior Zestimates?

Yes. When major improvements to the algorithm are made, we do re-compute the historical Zestimates for affected homes. Our purpose in doing so is to provide consumers with the best estimate of historical property valuations.

<http://www.zillow.com/zestimate/>

Statewide Random Sample

| County | PARCEL ID | ZEST- IMATE June 2014 | ZESTIM ATE ADJ @0.82 | 2016 FCV | ZILLOW FCV DIFF | PCT DIFF | ABS PCT DIFF | ZILLOW MEDIAN ERROR CLAIM FOR COUNTY | ADDRESS | CITY |
|------------|-------------|--------------------------------|----------------------------|-------------|-----------------------|-------------|--------------------|---|-------------------------|-----------------|
| Apache | 106-63-029 | 132,000 | 108,240 | 81,413 | 26,827 | -24.8% | 24.8% | 36.3% | 22 COUNTRY ROAD 3167, | VERNON |
| Cochise | 105-92-135 | 163,000 | 133,660 | 138,535 | -4,875 | 3.6% | 3.6% | 7.3% | 805 SUFFOLK RD, 85635 | SIERRA VISTA |
| Coconino | 105-06-066 | 286,000 | 234,520 | 227,545 | 6,975 | -3.0% | 3.0% | 7.4% | 3993 S NICHOLAS ST, 860 | FLAGSTAFF |
| Gila | 304-53-026 | 233,000 | 191,060 | 184,699 | 6,361 | -3.3% | 3.3% | 8.7% | 304 N MOGOLLON TRL, 85 | PAYSON |
| Graham | 101-19-024 | 116,000 | 95,120 | 89,228 | 5,892 | -6.2% | 6.2% | 8.3% | 1318 S 8TH AVE, 85546 | SAFFORD |
| Greenlee | 500-09-040B | 91,000 | 74,620 | 34,349 | 40,271 | -54.0% | 54.0% | n/a | 40 OSO TRL, 85534 | DUNCAN |
| La Paz | 311-29-017 | 135,000 | 110,700 | 76,296 | 34,404 | -31.1% | 31.1% | 17.6% | 1421 S NAVAJO AVE, 8534 | PARKER |
| Maricopa | 149-35-082 | 156,000 | 127,920 | 120,600 | 7,320 | -5.7% | 5.7% | 7.4% | 3132 W SURREY AVE, 850 | PHOENIX |
| Mohave | 311-15-001A | 109,000 | 89,380 | 89,415 | -35 | 0.0% | 0.0% | 7.2% | 2242 CLUB AVE, 86401 | KINGMAN |
| Navajo | 309-48-121C | 95,000 | 77,900 | 62,516 | 15,384 | -19.7% | 19.7% | 10.2% | 557 S 7TH AVE, 85901 | SHOW LOW |
| Pima | 140-13-161 | 110,000 | 90,200 | 104,183 | -13,983 | 15.5% | 15.5% | 6.1% | 2149 E JASMINE DR, 8570 | TUCSON |
| Pinal | 505-38-358 | 160,000 | 131,200 | 136,761 | -5,561 | 4.2% | 4.2% | 5.9% | 339 E PASEO DE PAULA, 8 | CASA GRANDE |
| Santa Cruz | 101-34-102B | 62,000 | 50,840 | 51,519 | -679 | 1.3% | 1.3% | 9.5% | 607 N SONOITA AVE, 856 | NOGALES |
| Yavapai | 103-32-041 | 169,000 | 138,580 | 137,943 | 637 | -0.5% | 0.5% | 6.6% | 5010 N PINTO DR, 86314 | PRESCOTT VALLEY |
| Yuma | 664-01-035 | 67,000 | 54,940 | 60,011 | -5,071 | 9.2% | 9.2% | 7.5% | 900 S PAGEAT AVE, 85364 | YUMA |
| | | | | | AVG | -7.6% | 12.2% | 10.4% | | |
| | | | | | MEDIAN | -3.0% | 5.7% | 7.5% | | |



Note: 1 SFR Property randomly selected from each county in Arizona



Results Question



We believe that a great amount of weight in their predictive models is based on a jurisdictions assessed values.

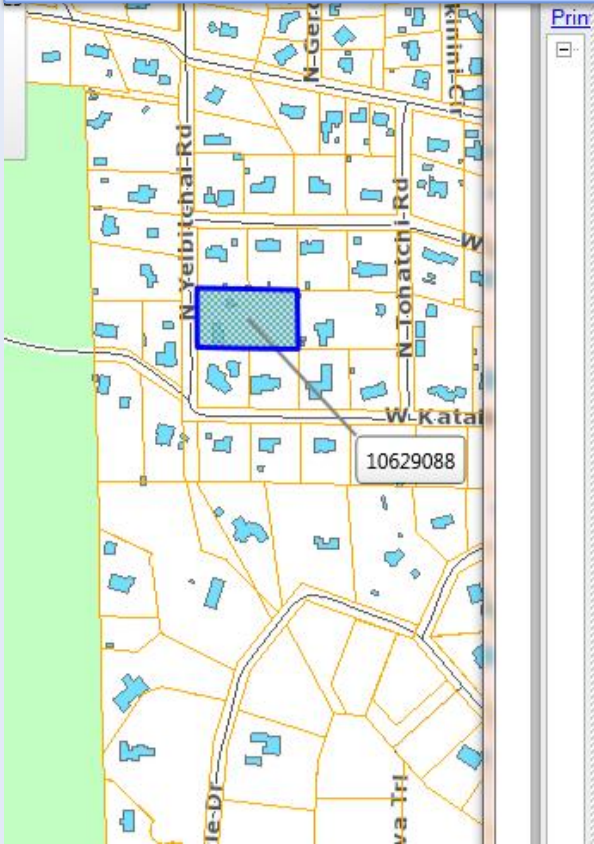
They utilize our “boots on the ground” and rely on a lot of our hard work.

Zillow Misses - Undervalued

Yavapai \$200,400

Zillow 118,900

-41%



Ranch 1 Story, Average Quality

1978 Year Built 1,554 sq feet

506 sq feet attached garage

Lot Size 1.62 Acres

Zillow Misses - Overvalued

Account Improvements Industrial Profile View Value Summary Comparables Adjustments Photos/Sketches

Yavapai \$31,246 Zillow 54,120 +73%

Transportation

Land Features

Districts

Zoning

Aerials Imagery

W Yavapai St

40634105

N 1st St

N 3rd St

E Pinal St

E Pima St

N Main St

N 2nd St

N 3rd St


100m

400ft

5.13 - 1 of 1 record

Print Pl

R0



Ranch 1 Story, Low Plus Quality

1933 Year Built 810 sq feet

No garage

35% Functional Obsolescence

Other Issues – Land Estimates

Yavapai \$16,300 Zillow 16,000 rounded

Zillow 1301 S Tonopah Way, 86326 LISTING TYPE

W Fir St

S Chuckawalla Dr

\$146K

\$159K

\$16K

\$166K

Year: 2015 Market Land: \$16,300 Cost: \$0

Urgent 3 Messages

406-50-620 - 2015

| Account # | Parcel # | Value Source | Status | Account Type |
|------------|------------|--------------|--------|--------------|
| R000142141 | 406-50-620 | Market | Active | Vacant |

Property Addresses

Ownership

Real Land Legal Parcels

Land Details

| Appraiser | CSB7424 | Gross Acres | 0.23 | Net Acres | 0.23 |
|----------------|---------|-------------|------|-------------|--------|
| Appraisal Date | | Net Sites | 1.00 | Net SF | 10,019 |
| Default LEA | 0602 | Gross Sites | | Zoning Code | |

Land Abstracts

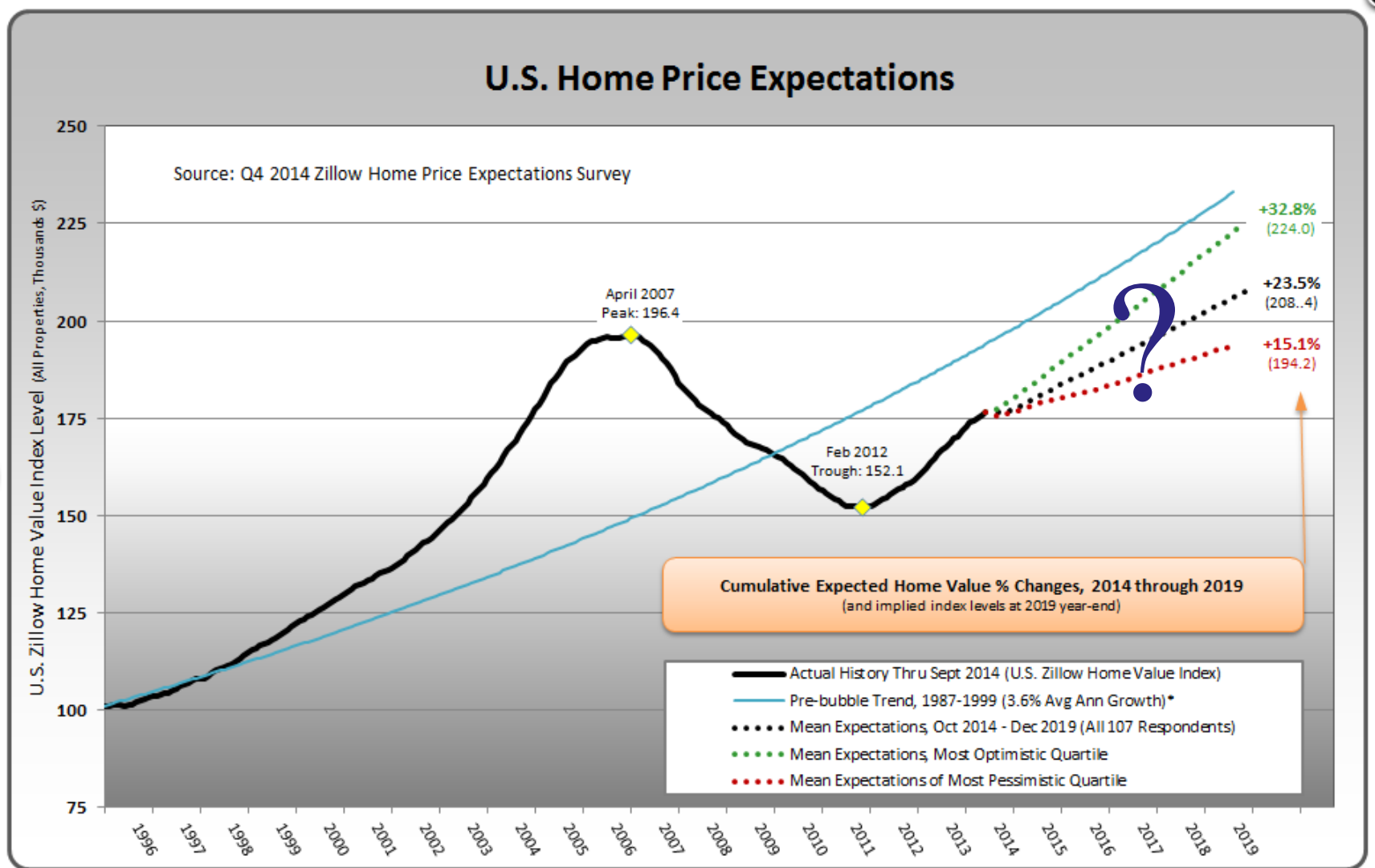
| Land Type | LEA | Legal Class | Net Acres | Sites | Actual \$ | Net |
|-----------|------|-------------|-----------|-------|-----------|--------|
| Vacant | 0602 | 02RL | 0.23 | 1.00 | \$ 16,300 | 10,019 |
| * | | | | | | |

Zillow Now Attempts to Forecast

<https://pulsenomics.com/Home-Price->



Zillow's Crystal Ball to the Future?



* Pre-bubble Trend based on S&P/Case-Shiller U.S. National HPI (SF, NSA). Quartiles are based on panelists' expected cumulative home price change through Q4 2019

Powered by
pulseonomics
Pulseonomics LLC

Yavapai vs. Zillow Forecast



HOME PRICE EXPECTATIONS SURVEY RESULTS: Fourth Quarter 2014

Title Affiliation Response Date

Fourth Quarter 2014 Survey Summary:

| SALE YEAR | Sale Cnt | YAVAPAI Median Sale Price | Yavapai % Chg Over Previous | Linear Trend at 3.6% | ZILLOW |
|-----------|----------|---------------------------|-----------------------------|----------------------|---------|
| 1995 | 2,443 | 105,000 | | 105,000 | |
| 1996 | 2,630 | 111,750 | 6.4% | 108,780 | |
| 1997 | 2,904 | 116,000 | 3.8% | 112,696 | |
| 1998 | 3,395 | 122,500 | 5.6% | 116,753 | |
| 1999 | 3,565 | 129,900 | 6.0% | 120,956 | |
| 2000 | 3,464 | 139,900 | 7.7% | 125,311 | |
| 2001 | 3,936 | 145,000 | 3.6% | 129,822 | |
| 2002 | 4,507 | 159,033 | 9.7% | 134,495 | |
| 2003 | 5,105 | 173,500 | 9.1% | 139,337 | |
| 2004 | 6,637 | 200,000 | 15.3% | 144,353 | |
| 2005 | 6,908 | 260,502 | 30.3% | 149,550 | |
| 2006 | 4,987 | 280,900 | 7.8% | 154,934 | |
| 2007 | 3,630 | 280,000 | -0.3% | 160,512 | |
| 2008 | 2,660 | 235,000 | -16.1% | 166,290 | |
| 2009 | 3,027 | 193,000 | -17.9% | 172,276 | |
| 2010 | 3,326 | 171,000 | -11.4% | 178,476 | 171,000 |
| 2011 | 3,482 | 160,000 | -6.4% | 184,900 | 167,631 |
| 2012 | 3,340 | 180,000 | 12.5% | 191,560 | 167,330 |
| 2013 | 3,135 | 215,000 | 19.4% | 198,456 | 177,369 |
| 2014 | 2,289 | 228,712 | 6.4% | 205,600 | 186,238 |
| 2015 | | | | 213,000 | 193,687 |
| 2016 | | | | 220,670 | 198,529 |
| 2017 | | | | 228,616 | 204,684 |
| 2018 | | | | 236,846 | 210,824 |
| 2019 | | | | 245,371 | 217,149 |

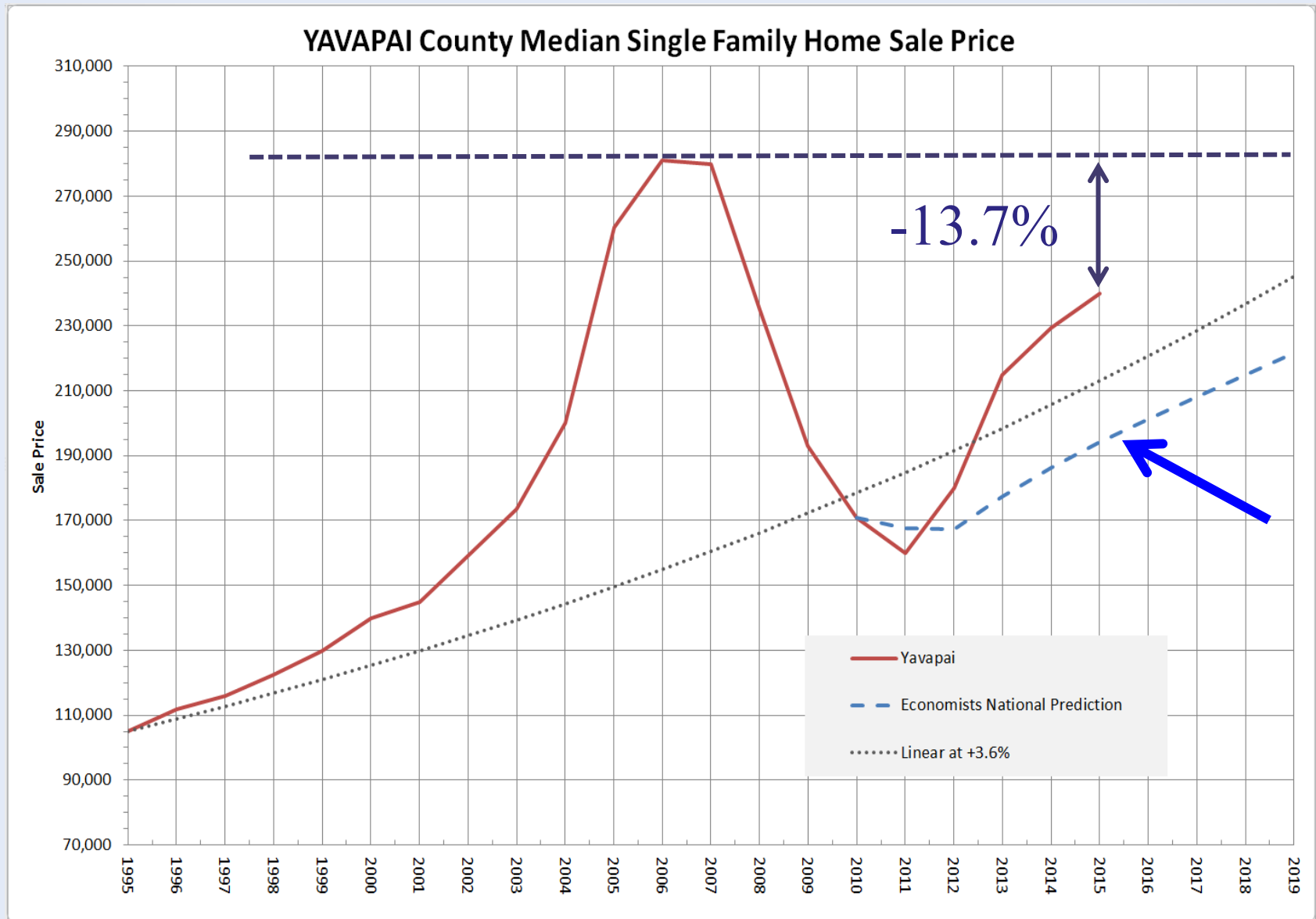
Estimated Home Price Performance (Dec/Dec)

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------|-------|--------|--------|--------|--------|--------|
| Mean | 4.78% | 3.71% | 3.18% | 3.32% | 3.10% | 3.17% |
| Median | 5.00% | 4.00% | 3.25% | 3.10% | 3.00% | 3.00% |
| High | 8.00% | 7.20% | 9.00% | 7.40% | 8.10% | 8.70% |
| Low | 1.00% | -5.30% | -4.70% | -2.00% | -3.00% | -5.00% |
| Standard Dev | 1.18% | 1.54% | 1.78% | 1.31% | 1.45% | 1.43% |

Home Price Expectations Survey™

Every quarter, Pulsenomics surveys a distinguished panel of over 100 economists, investment strategists, and housing market analysts regarding their 5-year expectations for future home prices in the United States.

Yavapai Actual vs. Zillow Forecast



Public Service News Release

Press Release

Assessor Pearsall Tests Zillow Home Price Estimates

Yavapai County, August 5, 2015 – Yavapai County Assessor Pam Pearsall has kept an eye on the growing popularity of real estate website Zillow.com in recent years. Having recently acquired Trulia.com it is hard to deny the impact Zillow will have on the national real estate market in coming years.



Zillow's business model is to be a "real estate portal" whereby it seeks to attract would be home buyers and sellers to its website. Part of what it does is to predict "Zestimates", which are estimations of a home's current market value. "Zillow has even begun trying to forecast the future trend of a home's value", Pearsall said.

Because of the growing trend of owners referring to Zillow estimates of their property, Assessor Pearsall asked her staff to do a study of a random sampling of homes in Yavapai County which Zillow had predicted values on. The goal of this study was to gain a level of understanding as to the accuracy of their estimates as they compare to her own mass appraisal process and values. Much of the property data Zillow uses for their predictions comes from County Assessor records.

In a recent survey conducted by Discover Home Loans of 1,003 homebuyers about how technology influenced their experience, 83% reported using listing sites like Zillow and Trulia to browse home listings. Zillow recently claimed to have hosted 73 million unique viewers of their website in December alone. With this big of an impact it seems likely that some local Yavapai County home buyers and sellers will be using Zillow in their own research.

County Assessors find it challenging to estimate property values on an annual basis for taxation purposes. Zillow on the other hand, attempts to predict a home's value on a weekly basis throughout the year by using what they call proprietary algorithms, statistical processes and geo coordinate data. The accuracy of these predictions has many skeptics questioning the accuracy and details of their data. The proponents, and Zillow itself, argue that their predictions are only meant to give a range of value to help a buyer or seller make

Beware of Misinformation



LOWER YOUR PROPERTY TAX WITH ONLINE DATA

“The great thing about Zillow is that their data is **wrong all the time!**Rest assured the property assessor’s office uses Zillow’s erroneous data to charge you higher taxes as well. I spoke to a number of people in the property assessor’s office over the years and they have ALL admitted their main strategy is to automatically tack on an annual increase based on an index and hope homeowner’s don’t have the time or willpower to contest the property tax bill.”

<http://www.financialsamurai.com/exploit-online-data-to-lower-your-property-taxes>

Conclusions of Study for Yavapai

We have concluded that it will be hard to ignore Zillow's growing influence in the real estate market in the future



versus



One Final Question



= ??????????????

Will Zillow's growing influence in the national real estate marketplace hinder or help Assessors ? Any discussion?

House Soon To Be On The Market?

\$390,122,001



1600 Pennsylvania Ave NW,
Washington, DC 20006

16 beds • 35 baths • 55,000 sqft [Edit](#)

Thank you for the opportunity to share



Pamela J. Pearsall
Yavapai County Assessor
Elected 2009
Pam.Pearsall@yavapai.us
928-771-3220



Who is the prize winner?

Zillow - \$390,122,001

Roundtable discussion?